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THE POLITICS OF NORTHERN INFORMATION PROVISION:
THE ALASKAN SITUATION

Thesis
Submitted for the M. Phil.
in Polar Studies,
Scott Polar Research Institute,
Faculty of Earth Sciences and Geography,
University of Cambridge

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5 June 1987



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Author's Statement

This thesis does not exceed 20,000 words in length excluding footnotes, tables, appendices, and list of references. With the exception of the footnotes and material cited in the bibliography, this thesis is my original work and does not appear elsewhere.

Ronald K. Inouye
 Ronald K. Inouye

5 June 1987
 5 June 1987

FOREWORD

Emily Ivanoff Brown "Ticasuk"

I was named after my mother's cousin. Her name was Emily--her Eskimo name was "Ticasuk". And when I became older, my mother told me what it meant. That means a hollow in the ground. And I cried when I was a little girl. Big tears rolled down my cheeks because I was so disappointed. Everytime I saw a hollow in the ground, I would walk around it. I didn't want to walk into it because it was my name! And then my mother told me not to cry--that it was a beautiful name. You see, the four winds on this earth, when they blow from the north or south or east or west, they bring the wealth of the earth and they lodge into that hollow, and that's MINE. NOW I think that's a beautiful name.

Wigginton, 1976

Emily Ivanoff Brown was a grand Inupiat Eskimo elder. During the late 1970s and early 1980s she was a familiar figure around the University of Alaska, Fairbanks during her later years. She represented the link between an older Inuit tradition and contemporary Alaskan life--assured, modest, curious and ever eager to teach and to learn. After raising a family and concluding long and distinguished nursing and teaching careers in numerous rural Alaskan communities which earned her a Presidential citation for service to others, Emily returned to the University during her retirement years to write and study. She authored several books about traditional Inupiat life and began building her dream, an archive of Inupiat knowledge and the world of her progenitors. Although that catalog remained unfinished at her death in 1982, she lived her name "Ticasuk," a repository of knowledge and learning.

THE POLITICS OF NORTHERN INFORMATION PROVISION:
A REVIEW OF THE ALASKA SITUATION

INTRODUCTION

The course of events will be influenced significantly by the major policies of governments, transnational corporations, and other powerful institutions...The primary difficulty now is that most government and transnational corporations, despite great volumes of information, don't have enough knowledge and understanding to fashion coordinated, comprehensive policies. Developing the information, the knowledge and the policies will be a major challenge over the foreseeable future not only for them, but also for researchers in the field.

William H. Melody, 1986, pp. 14-15

In this Canada House Lecture entitled "Some Characteristics of Knowledge in the Information Society," William H. Melody, Director of the Programme on Information and Communication Technologies of the *British Economic and Social Research Council*, spoke thoughtfully and knowledgeably about the impact of information on contemporary society. In his wide-ranging lecture, Mr. Melody discussed not only information, but also the potential roles information policies could have in meeting human and institutional needs. And his comments were appropriate not only to the Canada House audience, but in the opinion of the author, also to those concerned with information provision in Alaska. It is the author's thesis that the State of Alaska should consider the development of an information policy, and particularly because of the politics of northern information provision.

In this thesis the author will selectively review general issues relating to information and its increasingly significant role in the lives and economies of individuals, institutions, and political entities. The current Alaskan information cooperation and coordination will be challenged by intervening factors--technological, political, disciplinary, cultural, and economic--which could significantly alter the current system. The author then recommends the consideration of the development of an Alaskan State information policy.

THE SIGNIFICANCE OF INFORMATION

'The intellectual life of man,' William James once remarked, 'consists almost wholly in a substitution of a conceptual order for the perceptual order in which his experience originally comes'...the first order of questions, therefore, is the adequacy of our concepts as related to the purposes at hand.

Bell, 1973, p. 301

Information is: knowledge, what is told, news. Information is also a resource; to some, a commodity of value. Being elusive in definition, the context may define what information is. Isolated facts, like isolated information must be placed into a context from which meaning and value may arise.

Information that only teaches technical solutions, that lists facts without putting them into a perspective and without structuring them into a coherent project, and, on the other hand, information that proclaims ideals without inserting them into the practical development of society will increasingly be regarded as pseudo-information. Making information useful, therefore, means reaching a minimum agreement on the structure that transforms it into coherent and accepted thought.

Nora and Minc, 1980, p. 139

Does information translate into knowledge? Does more information mean there will necessarily be more knowledge? William Melody, of the *British Economic and Social Research Council*, currently on leave from the Department of Communication, Simon Fraser University, Vancouver, Canada, discussed some implications of increasing information. He observed that any direct causal relationships between new information technologies, increased information, improved knowledge and a better society is oversimplistic, if not gratuitously superficial (Melody, 1986, p. 3). He makes distinctions between knowledge and short-term, instrumental, and functional information. He asks, "If the populace is preoccupied with ephemeral, instrumental information, what will be left when it has been forgotten? Will this tend to reduce knowledge and comprehension? Will

people be taught to be smart, but not wise, to respond with efficiency, but not understanding, to know how, but not why? (Melody, 1986, pp. 11-12)

Melody observes the passive nature of information intake by listening, reading, and observing contrasted with the intellectual emancipation of actively talking, writing, and participating to develop one's critical capabilities. Will the provision of instrumental information actually run counter to developing a knowledgeable populace? "The information economy may be characterized by a greater quantity of information, but will there be more knowledge? If the information is essentially short-term, instrumental and functional, will it expand knowledge, or will it substitute for knowledge?" (Melody, 1986, p. 12)

Humans can process but a limited amount of information, and if societal structure requires increasing amounts of instrumental information, then the non-instrumental information leading towards knowledge is short-changed. As Melody states, "The growing importance and value of vast quantities of instrumental information our society might be more an indicator of a reduced level of knowledge and understanding of our society, and a desperate attempt to overcome his deficiency" (Melody 1986, p. 13).

Information might be considered from the perspective of those who produce it, those who use it, those who manage it, those who benefit from its sale or gratis provision, its wide-spread distribution, highly discretionary use or total suppression.

Northern Information

In this work, "northern information" is information about Alaska. As the only arctic state among the United States, Alaska singularly qualifies as the national peephole into the vast polar region. Militarily, its geographic location is strategic, a mere 2.5 miles separating Little Diomed Island (US) from Big Diomed Island (USSR) in the Bering Strait, and equidistant between Tokyo and London on the polar route. Alaska's shoreline across the Bering and Chukchi Seas from the USSR is continuously monitored. Its natural resources currently provide 20% of the US oil production and an estimated 50% of the US and 17% of the world's coal, 58% of the US offshore oil resources, and currently 20% of the US oil

production (Foster, 1985, pp. 228-230), contrasts with its modest 539,600 population, 0.23% of the US total (Williams, 1987, p. 2). [Appendix 1 presents a brief, excerpted history of Alaska.]

The national interest in the arctic is summarized in a recent lecture "the Age of the Arctic" by Dr. Oran Young presented to an Anchorage public meeting of the *US Arctic Research Commission*.

Driving the emergence of the Arctic as a dominant concern are its militarization and industrialization. Dr. Young described some of the military activities and systems operating in the Arctic, noting that nuclear-powered submarines, carrying sea-launched ballistic missiles have the potential to strike nearly all key targets in both the Soviet Union and the United States. In regard to industrialization, he summarized data on the magnitude of oil and gas resources, as well as of coal, other minerals, and ores, and hydroelectric power. Resource exploitation can result in environmental, social, and cultural problems and adversely affect renewable resources such as fish and timber. To devise ways to resolve the conflicts and arrive at arrangements that reconcile local interests and the national interest is the challenge we face now and in the years ahead.

U.S. Arctic Research Commission,
1987, p. 12

Reconciling local interests among national and international interests is indeed the challenge ahead. Alaska's physical isolation from the contiguous United States and proximity to her international, circumpolar neighbors cannot be replicated in international policy. Alaska and indeed the national US interests in the north require a blend of local interests and national need, and determining the blend will require information.

Citizenship Rights and Responsibilities

The United States Constitution's first amendment prohibiting government interference with an individual's right to speak or write freely, provides the foundation for U.S. information policy... (and) stands for the principle of open information exchange, as well as providing

encouragement to individuals and private organizations for the generation and collection of whatever information is of use to them (Yurrow, 1981).

This first amendment right to open information exchange is enjoyed by all Alaskans as U.S. citizens. The reciprocal citizenship responsibility of the right to speak or write freely is to be informed. Information is therefore basic to national and state citizenship rights and responsibilities. Reinforcing this belief in information and access to it, the last *White House Conference on Libraries and Information Services* passed a resolution that "all persons should have free access, without charge or fee to the individual, to information in public and publicly supported libraries" (Wilson, 1987, p. 5).

Information Providers

Discussing the United Kingdom online database markets, Harry East, Senior Research Fellow of *City University's* Department of Information Science listed three basic categories of database producer: the "for profits", the "for funs", and the "for duties" (East, 1986). These categories apply equally well for other information providers.

The "for profits" are commercial vendors utilizing information and its access as products and services. The "for duties" are institutional, organizational, or governmental agencies which produce databases and information because they are required to by laws, statutes, or resolutions. The "for funs" are those who produce databases and information for reasons other than profit or mandate. East's categories illustrate well the provisioning aspect of information, and the various motivations for creating, acquiring, accessing, organization, storing, and ultimately, using information.

Alex Wilson, the *British Library's* Director General of Humanities and Social Sciences, observes the role of libraries in the provisioning of information to diverse citizens with varied needs and wide-ranging abilities. "Libraries can be seen in part as a compensating device, a safety value if you like, providing opportunities for those disadvantaged

in intellectual and cultural opportunities; but they are also a cooperative device whereby society widens its resources and services" (Wilson, 1987, p. 2).

The Information Age

Perhaps "information" is whatever is produced? Perhaps defining "information" requires the conceptual shift to which William James referred. Does the post-industrial "information" age demand a shift in conceptualization?

'The intellectual life of man,' William James once remarked, 'consists almost wholly in a substitution of a conceptual order for the perceptual order in which his experience originally comes'...the first order of questions, therefore, is the adequacy of our concepts as related to the purposes at hand.

Bell, 1973, p. 301

Daniel Bell's provocative 1973 venture in social forecasting entitled The Coming of Post-Industrial Society heralded the primacy of theoretical knowledge during this post-industrial age. The curtain had descended on the previous industrial, goods-producing society and the era of practical knowledge. He posed that post-industrial society would be organized around knowledge for social control, and this directing of innovation and change contrasted with the earlier industrial society which coordinated men and machines for the production of goods. Whereas the major 19th and 20th century industries--steel, electric power, telegraph, telephone, automobiles, aviation--were the creations of inspired inventors and tinkers who had little knowledge of science nor the fundamental laws underlying their creations, the current major industries and services are increasingly based upon theoretical knowledge from which have evolved goods and services like computers and genetic engineering. And, it is this shift towards theoretical knowledge which changes social relations and requires new governing structures politically managed (Bell, 1973, pp. 19-20).

Bell's post-industrial society becomes increasingly political as choice becomes conscious and the decision-centers more visible. "The nature of a market society is to disperse responsibility and to have 'production'

decisions guided by the multiple demands of the scattered consumer." Bell continues, "But the decision to allocate money to one scientific project rather than another is made by a political center as against a market decision. Since politics is a convergence of interests and values--often diverse--an increased degree of conflict and tension is probably unavoidable in the post-industrial society" (Bell, 1973, p. 263). In the national interest it is increasingly common for governments and private industries to cooperatively rescue ailing national industries or launch new commercial ventures.

As the quantity of information increases and information changes, the need and will to control it also significantly increases. Information control becomes critical because of the sheer quantity and increasingly technical diversity of information. Information mediation or interpretation evolves, evidenced in the proliferation of specialized periodicals which abstract, synthesize, and interpret vast amounts of new information in increasing numbers of technical fields for the specialist and general reader alike (Bell, 1973, p. 470) and the significant number of jobs thereby created.

Jean-Pierre Dupuy, Professor of Economics at L'Ecole Polytechnique in Paris, portrays the post-industrial society which he terms the "informational society" as a phase in the history of capitalism coping with its contradictions. By that he views the informational society strengthening the monopoly of economic activity over the social and political dimensions of our lives, and instead of fostering harmony among people, the new technologies of communication promote alienation. The informational society isn't an arcadian community but rather a society "in which there can be no community because its very complication makes it impossible to assign responsibilities or exert authority (Woodward, 1980, p. 5).

INFORMATION POLICY

"Policy" is defined in the Oxford English Dictionary as "government, administration, the conduct of public affairs; a course of action adopted and pursued by a government, party, ruler, statesman, etc."

US Information Policy

Tony Carbo Bearman, Executive Director of the US National Commission on Libraries and Information Science cited three major trends in the United States which lead her to call for a US information policy.

- 1) US demographic shifts--increasing life expectancy, decreasing birth rates, geographic relocations, and changing ethnic compositions--require new information to provide necessary services and products.
- 2) Technological information technology developments in computers and telecommunications have vastly increased and improved information handling capabilities, but raised new ethical problems such as protecting the privacy of personal records and intellectual property.
- 3) Changes in the information, the information handling professions, and the public's recognition of the significance of information has increased. These trends have raised significant issues and increased the need for information policies (Bearman, 1986, pp. 105-106).

As Bearman indicates, information policies are guidelines which provide direction in the national provision of information. The policies enunciate the national information needs and objectives, and clarify the national interest. National policies become the standard for evaluating information.

French Information Policy

Information policy in France is well represented by the Minitel system or "telematique," the interconnection between computers and telecommunications (Nora and Minc, 1978, p. vii) which has placed a computer console in most French households. In the French government's interest to upgrade the national telecommunications infrastructure, the

French PTT (Post, telephone, and telegraph) determined that phone lines would serve as the initial link. Homes served by telephones could subsequently be provided with many other telecommunications services-- computer links, teletext, information banks, facsimile systems, home banking, etc. Recognizing that providing the infrastructure would be slow without a nationally coordinated effort and that the development of such technology for domestic use could create an international marketable commodity with lucrative economic returns, the French Government initiated a comprehensive national information policy represented by the Minitel system.

In the opinion of Daniel Bell, French society had become "increasingly rigidified in its bureaucratic and political institutions, and thereby less able to respond readily to the shocks of change that engulf it" and the "telematique" idea revealed "how a new technology can reshape a social structure and why the political system has to change to meet the new scales of economic life and the new patterns of social life that result" (Bell, In: Nora and Minc, 1978, p. xv). Through this upgrading of "the telematique," the Giscard d'Estaing government initiated various state-subsidized actions met two goals: improving French internal telecommunications and developing an exportable technology (Cronin, 1987, p. 94). The Minitel system now provides the French household with state-of-the-art domestic telecommunications service, and an exportable, potential revenue producing technology--two goals of the French information policy.

Nora and Minc cite the philosophy under which the French information policy evolved:

The traditional tools for interpreting society and forecasting its future would not be much help...If they cannot even accurately predict the outcome of struggles tied to production, they certainly cannot describe a world progressively escaping from it. The new challenge is one of uncertainty: there can be no accurate forecasts, only good questions on the means to advance toward the desired goal. The future can no longer be determined by prediction, but rather through planning and the capacity of each country to organize itself in order to achieve it.

Nora and Minc, 1980, p. 12

Northern Information Policy

A national US northern information policy is being indirectly formulated through the analysis and recommendations of the *Arctic Research and Policy Act of 1984*. Among the four major tasks of the national *Arctic Research Commission* is the "Improved logistical coordination and support for Arctic research and better dissemination of research data and information." This will be subsequently discussed.

Policy Development

Policy development is a difficult task, particularly relating to information. But France and Japan recognized the importance of the information sector to dynamic national industries and economies and established the appropriate policies, whereas the UK and the US have yet to take such decisive, and arduous, steps. As Cronin states of the UK, "there is no national information policy (qua policy) and responsibility for *de facto* information policy is scattered across numerous government departments" (Cronin, 1987, p. 95).

Perhaps of greater significance is not the contents of the policy, but rather the decision to develop a policy. Melody's earlier statement deserves consideration:

The course of events will be influenced significantly by the major policies of governments, transnational corporations, and other powerful institutions...The primary difficulty now is that most government and transnational corporations, despite great volumes of information, don't have enough knowledge and understanding to fashion coordinated, comprehensive policies. Developing the information, the knowledge and the policies will be a major challenge over the foreseeable future not only for them, but also for researchers in the field:

William H. Melody, 1986, pp. 14-15

A SELECTIVE REVIEW OF ALASKA'S INFORMATION PAST

Alaska has long experienced what I would personally term 'Records Colonialism'. Many businesses and government agencies have worked extensively in Alaska for many years, but have withdrawn their records which intimately document their activities in Alaska. While logical from the point of view of many organizations, businesses and agencies, it provides a very difficult barrier for many Alaskans who wish to study the sources of their own history. Continued and enlarged cooperative projects between the State's major repositories and those outside the State which have significant resources can provide an enlarged base of materials with which to study the State's past.

McCarthy, 1982, p. 285

The current status of information in Alaska is largely the history of libraries and the collective efforts of librarians to acquire, provide access to, and maintain collections. This chapter selectively reviews the history of some of the major Alaskan collections and illustrates the significant degree of interlibrary cooperation. The situations are pragmatically selective for two reasons: lack of access to other documentation, or the lack of any documentation!

Alaska Natives and Russian-America

Many significant collections of Alaskan information aren't in Alaska. Rather they are in diverse locations reflecting Alaska's investigation by international adventurers, explorers, scientists, priests and collectors, and reveal its relatively short history as a sovereign entity. Her original inhabitants--the Aleuts, Eskimos (Inuits), and Indians--now collectively known as Alaska Natives, orally carried onward their histories and stories until the earliest writing and recording of this information by the Russians in the 1700s. Exploiting the furs of "Russian America" as Alaska was then known, the Russians had contact with the Aleuts of the Aleutian Islands, the Yupik Eskimos of the Southwestern mainland and northern Bering Sea, some of the Athabaskan Indians along the major river systems, as well as the Tlingit Indians of Southeastern Alaska, the

"panhandle." Most recorded Alaskan information was actually gathered by explorers and scientists during Russian exploratory expeditions, and yet the material collections of those ventures reside within the Soviet Union.

During Alaska's Russian period 1724-1867, Shelikov of the Russian-America Company established schools and libraries, and the larger outposts of Kodiak and Sitka had libraries. All printing was done in St. Petersburg (today's Leningrad) as there was no printing press in Russian-America (Wickersham, 1926, p. 14). Nikolai Petrovich Rezanov, director of the Russian-America Company is credited with organizing a basic library collection of books, maps, pictures, and similar material which was destined originally for Kodiak but went to Sitka in 1805 after that southeast Alaskan settlement became the Russian America administrative center in 1804 (Stewart, 1957, p. 6).

With the establishment of Russian trading and military posts in Kodiak, Sitka, the Aleutian Islands and along the major rivers--the Yukon, Kuskokwim, and Copper--the Russian-America Company accumulated commercial information. Russian Orthodox Church personnel ministered to the spiritual needs of the Russian military, commercial personnel, and those Alaska Natives living in proximity to the Russian centers. The Orthodox Church systematically collected for administrative and religious purposes significant information about all who were members. Because of their interests and training some of the Orthodox Church personnel collected significant non-religious information on their travels. The historic religious records were dispersed through successive changes in Church administration, although some original records are yet found in rural, isolated Orthodox Churches. The primary current sources of Orthodox records are in Kodiak at *St. Herman's Seminary*, an Orthodox training center; in Syosset, New York, the headquarters of the Metropolitan of the *Orthodox Church in America*; and in the Manuscripts Division of the *Library of Congress* where the greatest number of known Orthodox records are currently available (Shalkop, 1978, p. 287).

The first and only periodical or newspaper published in Russian-America appeared in the fall of 1867 under the title "The Esquimeaux". Published in Libbysville, it was written by J. J. Harrington for distribution to the construction camps of the *Western Union Telegraph Company* then laying telegraph cable across the Bering Strait from the

Seward Peninsula to Siberia for communication between North America and Europe. The project was terminated when the competing Atlantic cable was completed in 1867 (Wickersham, 1926, p. 16). However, accompanying the scientists and explorers siting the telegraph was a small collection of books, claimed to be the first library of US books in Alaska, the "Rodger's Arctic Library" (Stewart, 1957, pp. 11-12).

A significant collection of Alaska Native language and linguistic materials from the Russian period onward is in the University of Alaska, Fairbanks, *Alaska Native Language Center*. It contains virtually everything written in or about the Native languages (Minion and Cook, 1985, p. 286). Although the Russians were the first to study several of the Alaska Native languages, the majority of the Native languages have only recently developed standard writing systems; therefore the oral traditions have remained strong.

Currently, collections of published and recently collected oral materials are available regionally. Oral recordings are common in many communities, although systematic collection and curation is less so. Several non-profit associations of the 12 regional Native corporations created by *Alaska Native Claims Settlement Act (ANCSA)* (discussed later) have taping and archiving programs, most notably the *Sealaska Heritage Program* in southeastern Alaska. The Bering Strait region non-profit association *Kawerak* in Nome recently completed a sizeable oral history project. Statewide the *Oral History Program* of the University of Alaska, Fairbanks, *Rasmuson Library* maintains an index of known historical and contemporary Alaskan oral interviews and histories.

A major *Smithsonian* traveling exhibition and seminar series on the *Bering Strait* co-sponsored with Canadian and USSR Museums is being. Entitled the *Bering Strait: Crossroads of Continents*, the exhibition will provide the first opportunity for non-USSR scholars to study some of the materials collected in Alaska during the early Russian-America period.

International Exploration

Scientific information about Alaska was eagerly sought not only by the Russians, but by explorers from many other countries eager to find trading

commodities. Alaska was also visited and explored by adventurers searching for the Northwest Passage, that elusive link between Europe and Far Eastern trade. Explorers of numerous nationalities and often sailing under the flags of other countries, plied the North Pacific and Arctic Oceans in quest of trade routes and sale commodities. Many navigators and explorers--Cook, Vancouver, Perez, Malaspina, Tebenkov, Kotzebue, La Perouse, Roquefeuil, Bering--included Alaska as an area of their wider explorations. Current Alaskan place names--Valdez and Cordova (Spanish), Revillagigedo (Mexican), Prince of Wales (English), St. Paul and Russian Mission (Russia)--reflect the many languages and patrons. The material results of those voyages are now in museum and archival collections in Berlin, Madrid, the British Museum, the Hermitage, and other non-Alaska locations.

US Exploration

Prior to and subsequent to the 1867 US purchase, Alaskan information was sought by US commercial interests and the federal government itself. The successful Russian fur exploitation was enviously eyed by the British and the US commercial interests, as were other natural resources: gold, whales, and fish. The US Government efforts most systematically explored not only the commercial significant resources, but also the strategic benefits of Alaska's physical location. Numerous expeditions were mounted by various departments of the US Government: the Coastal Survey, Bureau of Fisheries; the museums, and particularly the *Smithsonian* were interested in the scientific and anthropological aspects of Alaska; even newspapers enticed readers with stories about the far North as the *New York Times* cosponsoring of Frederick Schwatka's 1886 Alaskan expedition (Sherwood, 1965, pp 77-78). The Kennecott Copper syndicate had a profitable, world-class mine along the Copper River near Chitina, and mining companies were interested in gold, silver and other minerals.

In the introduction to his 1927 Bibliography of Alaskan Literature 1724-1924 James Wickersham commented on the federal information about Alaska which he had assiduously researched for inclusion in what has since been called the "Wickersham Bibliography:"

The Congress of the United States has kept the Alaskan estate of the red-headed step-child of the nation in mind from the day it assumed the care of the trust, and its committees have been constantly at work on some Alaskan project in aid of the development of its government, its commerce, or its population. The mass of Congressional hearings, reports, and other printed documents about Alaska is so great and covers such a multitude of subjects as to forbid extensive description, though these items contain, in the most intimate and detailed way, historical data without which no student of Alaskan affairs may hope to appreciate its past history and future development
Wickersham, 1927, p. 27

Because Alaska's care was the responsibility of the many branches of the federal government, Wickersham commented upon the effect of increased public interest and activity resulting from the turn of the century northern gold stampedes:

The great Klondike gold stampede beginning in 1897, and the stampedes to Nome in 1899 and to Fairbanks in 1903, set nearly every inkwell in America at work, and from 1897, the stream of books, magazine articles and newspapers stories about Alaska took on the proportions of a flood...The War Department at once started out exploring parties searching for passes and trails through the Alaska mountains, began the construction of military telegraph lines and cables, and military posts...The Department of Justice and the Post Office and Navy Departments increased their number of reports greatly, but the Interior Department with its General Land Office; Bureau of Education, the Geological Survey; and the Alaskan Engineering Commission has printed almost an Alaskan library descriptive of its valuable services in the Territory.

The Department of Agriculture has been most active through the Weather Bureau; Bureau of Plant Industry; Forest Services, Bureau of Soils, Bureau of Biological Survey, its Alaska Agricultural Experiment Stations, and its General Publications, and has given immense impetus to home making, forestry, fox-farming, and the protection of animal and bird life in Alaska. The Department of Commerce, through the Bureau of the Census, the Bureau of Foreign and Domestic Commerce, Bureau of Fisheries, Bureau of Lighthouses, Coast and Geodetic Survey, Bureau of Navigation, and other service has given the world knowledge of Alaska's commercial value and greater security to that commerce.

Wickersham, 1927, pp.26-27

Alaska's total population remained small, and because the funders and the primary users of Alaskan information were outside of Alaska, those in Alaska knew little about the growing amount of Alaskan information. The major information sources remained in scattered depositories outside Alaska.

Alaska Library Development

From the 1867 US purchase of Alaska to its subsequent territorial status in 1912, Alaska administration was accomplished from the federal center, Washington, D.C. As during the period of Russian administration, distance decision-making continued; Alaskan information flow continued to the federal government centers. In 1900 the US Congress authorized the establishment of the Alaska Historical Library and Museum and enumerated its duties:

The same shall embrace copies of all laws relating to the District, and all papers and periodicals published within the District, and such other material of historical interest as the Governor may consider valuable and appropriate for such collection. The Collection shall embrace such curios relating to the aborigines and the settlers as may be by the Governor deemed of historical importance.

Report of the Progress and Condition of
the Territorial Library and Museum for
1939-1940, p. 1

However, the materials in the original 1900 Federal Alaska-Arctic research collection passed to territorial jurisdiction in 1922 and merged in 1966 with the *Alaska State Library* (Minion and Cook, 1985, p. 282). The current *Alaska Department of Fish and Game Library* in Juneau originated as a reprint and government documents library for fisheries management and research in the 1930s (Minion and Cooke, 1985, p. 278).

The first Alaska academic library began with 2,326 volumes in "Old Main" at the University of Alaska in Fairbanks when the first class of 15 students in 1922 (Elmer E. Rasmuson Library pamphlet, n.d.). Currently

known as the *Elmer E. Rasmuson Library*, it is the state's largest library and houses the University archives founded in 1965 (Minion and Cooke, 1985, p. 308).

Exemplifying the early local community libraries are Ketchikan and Fairbanks. Ketchikan's library, the longest continuously operating Alaskan public library, was established in 1901 by the Ladies Library Club and provided a reading room and circulating collection (Stewart, 1957, p. 19) which charged users twenty-five cents a month (Stewart, 1957, p. 25). Fairbanks' Thomas Memorial Library was built in 1909 and run by the Episcopal Church until 1915 when the Civic Club operated it (Stewart, 1957, p. 26). Then in 1942 when it was turned over to the city of Fairbanks (Minion and Cooke, 1985, p. 314). The library served the gold miners and prospectors who descended from the surrounding hills during the long, dark, cold winters to mingle with the Fairbanksans in the warm log building along the Chena River. These community libraries typified the pioneering spirit in which volunteers kept libraries alive with no professional librarians to guide them nor adequate funds for books (Stewart, 1957, p. 2)

Today many different types of libraries serve Alaskans. Government and special libraries provide unique collections for scientific, medical, legal and other specialties. Municipal and local public libraries provide services to the general public. Academic libraries serve community colleges and universities while school libraries provide materials for younger students. Military libraries have a long Alaskan history beginning in Sitka in 1968, the year after purchase (Stewart, 1957, p. 84).

The state funding for community and special libraries is consolidated with that of museums within the Department of Education. Libraries within the schools are largely the responsibility of local school districts as the academic libraries are for community colleges and universities. These different administrative units all obtain the majority of funding from state revenues. Alaska's 1986 population of 539,600 citizens (Williams, 1987, p.2) was 30% greater than in 1980 and almost 400% the 1950 population (Williams, 1987, p. 1). Economically the state's general fund revenues, pushed up by soaring oil revenues, tripled between fiscal 1979 and 1982--from \$1.5 billion to \$4.5 billion. The 1982 revenues were ten times higher than 1972 (ISER, 1987. p. 5) with revenues peaking in 1982 and dropping to

\$2.5 billion in 1986 and \$1.3 billion in 1987 (ISER, 1987 p. 6). (It is interesting to note the 1867 purchase price of Alaska at \$7.2 million.)

The Alaska Native Claims Settlement Act
and the
Trans-Alaska Oil Pipeline

Personal and collective identity development are significant among individuals and groups undergoing change. Alaskans--Natives and non-Natives alike--experienced change. Technology, educational opportunities, financial resources, and ultimately changing expectations altered the way Alaska Natives saw themselves. During the past two decades the Natives successfully united in a land settlement movement against the federal government contemporaneous with the national efforts to develop Alaskan petroleum reserves during the international oil crisis of the 1960s. Previously isolated groups of Alaska Natives became a unified and politically successful body.

The quest for Alaskan oil also improved the confidence of Alaskans who now had a bargaining relationship with the federal government. Previously subservient to the federal government which controlled 90% of Alaska's land and resources, the State of Alaska had not received its all its federal land entitlements granted in the 1967 Statehood Act. Federal lands were not transferred nor were management jurisdiction and other state sovereignty issues. However, the 1960s national quest for petroleum self-sufficiency required the federal government to settle these land ownership and resource management issues with the state. Because the State of Alaska and Alaska Natives owned the land over which the north slope petroleum was to be transported by pipeline to the ice-free tidewater port of Valdez in southcentral Alaska for transfer to supertankers, the federal government acknowledged its responsibilities and duly dealt with them to ensure the flow of oil.

After decades of frustrating and unproductive relations with the federal government, Alaskans--Native and non-Native alike--both had

successfully bargained with the federal government. And, they had won! Alaskans now had recognition, legitimacy and a recognized identity.

The *Alaska Native Claims Settlement Act (ANCSA)* of 1971 was not only a legislative settlement of Alaska Natives' claims for traditionally used lands, but it also kindled a sense of common identity among the Alaska Natives. *ANCSA* and the subsequent building of the *Trans-Alaska Oil Pipeline* (pipeline) were significant social and economic events (McCarthy, 1982, p. 283) of national and international significance. With the increased interest in Alaska Natives and Alaska's natural resources, the demand for Alaskan information increased at a time when pipelines and land settlements significantly increased the amount of money in the state. Publicly supported libraries, archives, and other information centers benefited from such funding. Fortunately, Alaska acquired information technologies at a time when the state revenues from oil exploitation were available and the public demand for information peaked.

Using anthropological research information as an indicator of recent increased information generation, Eugene West of the UAF *Rasmuson Library* reported about 3,000 papers prepared per decade to 1973. Then an increase to 4,500 - 5,000 occurred in 1982. This significant increase was largely due to new federal and state regulations requiring the reporting of archeological survey information relating to *ANCSA* and as part of environmental impact statements for major projects such as the oil pipeline, and the proposed Northwest Alaska gasline and the Susitna Hydroelectric projects; and, resource assessments of federal reserves such as the National Petroleum Reserve--Alaska and the Outer Continental Shelf. West also reported an approximate 300% increase in the number of authors and changes in the formats, now mostly in typescript and reproduced in small quantities necessitating extensive library handling when compared to the previous decade's more easily accessible traditional monographs and journal articles. (*Northern Libraries Colloquy* 9, 1985, pp. 199-200).

As Harry East of London's City University had been previously cited, there are three categories of database producers: "for profits," for "funs," and "for duties." This final category of Alaskan information producer captured significant amounts of information because of the *ANCSA* and the oil pipeline. Federal and state government agencies collected vast amounts of information required by statutes and laws. Non-governmental

agencies became involved as advocates or detractors of *ANCSA* or the pipeline, reviewing and generating additional quantities of information and data. The second category of East's information producers also benefited from the increased activities of local historical societies. Ultimately, the "for profits" services arrived in Alaska, but the demand for pay services is modest.

The level of *ANCSA* and pipeline information acquisition peaked during the late 1970s and early 1980s when those major activities stabilized. In the mid-1980s the amount of public funding and private gains from those events have dramatically declined as the 16th anniversary of the *ANCSA* settlement has past, and the price of petroleum has plunged.

INTERLIBRARY COOPERATION

Alaska's libraries altogether have the resources of a respectable medium-sized academic library elsewhere in the country, in the neighborhood of one and three-quarters million volumes. There is perhaps one advantage in being so resource-poor...it is early enough in the development of Alaska's libraries to avoid some of the mistakes made elsewhere in attempts to devise cooperative systems....often such mistakes are borne of ingrained tradition and self-interest. We are fortunate that these qualities are not part of the Alaska experience.

Stephens, 1986, p. 174

Contemporary Alaskan information services are characterized by interlibrary cooperation. Libraries, as the primary centers of systematic information gathering and user provisioning, have a tradition of sharing; a cooperation nurtured by mutual scarcity of materials and a strong desire to assist users. Historically Alaska has not until recently had the luxury of multiple sources of materials, and to the present the previously established tradition of sharing has been well entrenched.

In 1967 the *Alaska State Library* developed a long range plan named "Library Services for All Alaskans" based on the concept of building on existing strengths to establish networks for matching users with materials. State Librarian Dick Engen cited the generosity of the major libraries in sharing materials and the level of cooperation between libraries of all types: academic, public, schools, special, government and the *State Library*.

To continue meeting the goal of providing library services for all Alaskans, the state library plan established three state regions each with a Resource Library to back-up local library services and a Research Library to provide in-depth research materials. The Northern region was based in Fairbanks with the *Fairbanks North Star Borough Library* as the Resource Library and the *University of Alaska, Fairbanks Rasmuson Library* as the Research Library; the Southcentral region based in Anchorage with the *Anchorage Municipal Library* as the Resource Library and the *University of Alaska, Anchorage Library* as the Research Library; and the Southeast region based in Juneau used the *Juneau City Library* as the Resource Library and

the *Alaska State Library* as the Research Library (Engen, 1982, p. 201). This Resource and Research Library system efficiently built upon existing resources and strong interlibrary cooperation, freeing library funding for enhancing existing institutions and collections rather than creating potentially competitive new ones. This basic 1967 organization system and philosophy continues in 1987.

Meeting the needs of users in a state where 70% of the communities aren't connected by a road system hasn't been a problem in delivering books (Engen, p. 20). "Books by Mail" is a well utilized service for families living in the rural areas, as have been a "bookboat" serving isolated Southeastern communities and having paperback collections in bush "airport libraries" (Engen, pp. 14-15).

Technologically the state's libraries and telecommunications systems have accommodated this information boom, having received proportional funding from state revenues to upgrade information facilities and services. The *University of Alaska, Fairbanks Rasmuson Library* has been enlarged, and a new *Anchorage Municipal Library and State Regional Center* facility were recently completed. The purchase and configuration of "Gnosis", a University of Alaska computer system for circulation, cataloging, and on-line searching, has been installed to service all University of Alaska libraries, and it is also to be phone modum accessible by non-University users. Grants for the provision of local library services have increased in number, and assist community libraries with heating costs, materials acquisitions, etc. En toto, Alaska's libraries have shared in the benefits of the state's oil revenue.

The Washington Library Network

The *Washington Library Network (WLN)* is a regional online union catalog, a bibliographic utility serving 345 Canadian and US member libraries in Alaska, Arizona, British Columbia, Idaho, Montana, Oregon and Washington (Alaska Library Association). It provides a comprehensive bibliographic system with a database for cataloging input as well as subsystems for acquisitions and interlibrary loan (Innes-Taylor, 1982, p. 55). When one library catalogs a title and shares that information through

WLN, each subsequent member user of that catalog information saves \$18 in cataloging staff time. WLN provides the location of nearly 2 million titles for resource sharing, and the possibility of adding Pacific Rim resources is feasible as libraries in Australia, New Zealand and China have selected WLN software (Alaska Library Association). Alaska joined WLN in 1975 when the polar materials of the *University of Alaska, Fairbanks Rasmuson Library* were coded by the *State Library* in Juneau and placed into the new WLN database. In 1977 the *State Library* became the first non-Washington state online WLN participant followed the next year by the *Rasmuson Library*. Since then many other Alaskan libraries have become members.

Access to Alaska and polar materials has been a major concern of Alaskan libraries. However designing a system which would link Alaskan libraries together exclusively to provide such services was economically impossible because of the high capital and maintenance costs of the technology for a small number of libraries. The WLN network provided an area network, aggregating users and reducing individual costs to feasible levels.

The larger Alaska WLN libraries provide the initial cataloging of Alaska and polar materials which can then be utilized by the other WLN libraries including the smaller Alaska libraries which otherwise lack staff and expertise for such processing. The *Rasmuson Library* catalogs the academic and research titles, and the *State Library* concentrates on the Alaska State Governmental publications with the other member libraries responsible for the locally generated municipal documents. Such cooperative cataloging provides wider coverage than would be otherwise possible should each library catalog its material separately (Innes-Taylor, 1982, p. 55-56).

Sharing among varied types of Anchorage libraries is exemplified in the purchase of fishery books. The *Alaska Department of Fish and Game* collects hatchery books, the public library collects material on commercial fishing techniques, the university library buys books on marketing in the fishing industry, the *Alaska Resources Library* purchases biology books, the *Anchorage Historical and Fine Arts Museum* obtains historical books on fishing (Alaska Library Association).

Alaska Library Network Catalog

All the listings in Alaska's State Library, academic, and major public, school and special libraries totally 775,000 Alaskan titles listed in the *Washington Library Network* are reproduced on a microfiche catalog annually and provided to every public, university, community college, special, and high school library in the state. This *Alaska Library Network Catalog* (ALNCat) is also sent to every elementary school library in towns and villages where there is no other library to ensure that every Alaskan community has ready access to the material held in every major library collection in the state through the interlibrary loan system (Alaska Library Association).

Alaska Conspectus

Alaska is at a crossroads in terms of its library system development....in order to provide improved stewardship of state library resources, it will be necessary for libraries to forge a system of coordinated and cooperative collection development so that they may together focus the financial and human resources available...if this is done, the state will develop an advanced capacity to support research, study, and information distribution at much lower cost than for most of the 'lower 48' states, where a history of lack of cooperation and coordination has resulted in the development of vast, infinitely redundant and gigantically expensive library collections.

Paul Mosher in A Plan for Cooperative Collection Development Among Alaska Libraries. In: Stephens, 1982, p. 173-174

A "conspectus" according to the Oxford Dictionary of Current English is "a general view or survey; synopsis." Graham Mackenzie, librarian of the University of St. Andrews defines the "conspectus" as "a methodology for describing in standard format the strength, weakness, and present acquisitions policy of a library. This is done by dividing the Library of Congress classification into minimal subject groupings. Two indicators within the range 0-5 are assigned to each group: one describes the existing strength of the collection, the second the purchasing policy in force"

(Mackenzie, 1986, p. 322). Defined by the members of the Alaska Research Libraries Group, it is "a profile of library and information resources by subject, showing relative strengths library by library. A conspectus...is a tool for analyzing and comparing collections...it is a map of subject strengths" (Stephens, 1986, p. 176).

The *Alaska Research Libraries* committee surveyed their collections to develop the *Alaska Conspectus* which used a 5 scale indicator of each library's subject collection and acquisition commitment. When pooled with similar data from the other libraries in the *Alaska Conspectus*, patterns emerge indicating collection strengths and weaknesses upon which future acquisitions decisions can be based. Linked through the interlibrary loan system, libraries can then continue to provide users with the appropriate materials and avoid unnecessary duplication.

The *Alaska Conspectus* idea has gained support in Oregon, Washington, Idaho, and Montana where a regional *Pacific Northwest Conspectus* project has been funded by the *Fred Meyer Charitable Trust* to survey that region's information collections in over 200 libraries (Stephens, 1986, p. 176). The *American Library Association* has cited Alaska's libraries as a national model for successful networking (Alaska Library Association).

Training and Continuing Education

...I want to stress that the Alaska State Library, which is responsible for overseeing library service in Alaska, the University of Alaska System, and the Alaska Library Association, have always worked together from the beginning...to provide a comprehensive approach to library training...In the other continental states, it is often true that the state library speaks to public libraries, the university speaks to itself, and the Library Association is so diffuse, it doesn't do anything. So in Alaska we feel we are exceptionally fortunate to have this cooperative approach...

Sharon West, UAF Rasmuson Library
In: Lesh and West, 1985, p. 116

Training for librarians and information specialists in Alaska has a short history. The closest professional library school for Alaskans is in Seattle at the University of Washington. As most small community libraries

have limited collections, and are run by volunteers, their training needs are significantly different from those pursuing professional credentials. Basic short courses and workshops for individuals organizing and directing community libraries have been conducted by Community Colleges, the University of Alaska, and the *Alaska Library Association (AkLA)* and increasingly under the auspices of Alaska Native associations.

Professional librarians are found in the major academic and research libraries, large municipal libraries, the libraries on the numerous military bases, the public schools, special libraries, and several private company libraries. Continuing education is available within the State through short courses and workshops, most cosponsored by *AkLA* and the *State Library*.

Village Library Aides

Two basic programs to train individuals for village libraries developed during the last decade, one through the University of Alaska, *Library Technical Assistant (LTA)* Program in Fairbanks and the second through the Kuskokwim Community College (KCC) in Bethel. Although organized through those Community Colleges, both programs were assisted by the *State Library*.

These programs were significantly unique by attempting to identify the conditions under which their students would ultimately work. The training reflected the complex nature of village life and the increasing and significantly important role the village library could and should play in meeting the community needs. In brief, the village librarian in the TVCC program was appropriately called a *Community Information Specialist (CIS)* since the needs were beyond those currently encapsulated in a "librarian."

Village life in rural Alaska is significantly affected by technology and bureaucratic administration. Television and telecommunications benefit and intrude on every village regardless of its location or desire for intrusion. The increasing complexity of local, state, and federal governance requires continuous two-way communication between and among individuals, communities, and institutions.

The State of Alaska was responsible for the installation of telecommunications systems in most rural villages to provide basic communications services for the local citizens. As a part of that technology, villages acquired opportunities to utilize services such as telephones, teleconferencing, etc. Such technical capability was quickly tapped by the State Department of Education and the University of Alaska, coordinating audio, video, and computer networking into the "Learn Alaska" telecommunications system. "Learn Alaska" provided data processing and administrative and instructional services to all parts of the state; it developed distance education for students previously unserved. A similar state governmental telecommunications system was used by elected governmental representatives to link their previously isolated constituencies into the legislative hearings and other public governmental processes.

The benefits of such telecommunications technology could be significant, but many local communities lack the expertise or incentive to participate. The *CIS* could facilitate such services in the communities desiring such services so the *CIS* training went beyond that of the keeper of the books in the village library. Rather the *CIS* was perceived to combine traditional library services, information referral, whatever that information might be, and the ability to handle telecommunications hardware and problem solving (Lesh and West, 1982, p. 117).

In 1980 in the southwestern part of the state, the Kuskokwim Consortium Library in Bethel, a consortium serving both the Kuskokwim Community College and the Bethel public, began the *Village Library Project*, a training project based on experience in the early 1970s on the Seward Peninsula to train local villagers as library aides or library technicians. The *Village Library Project* served the isolated, communities scattered along the Yukon and Kuskokwim Rivers and the Bering Sea coast. It provided core library collections, furnishings, resident library aide training, and the costs of the regional trainer. The first year of the training program was devoted to defining what functions a library should serve within the particular community. Built upon a local community theoretical base, the training then imparted the more usual library training skills of cataloging, purchasing, and library management (Hills, 1984, p. 211). Part of the training was to ensure each village became aware of how to apply for

successive and continuing operational funds through local and state governments.

These two programs illustrates how library training has been conceptualized and delivered. The current lack of continuing funding for such training reveals the vulnerability of such programs, but illustrates the success of close cooperation among diverse institutions.

Continuing Professional Library Education

Continuing education for professional librarians and information specialist is similarly limited within Alaska. Special workshops are conducted during the annual meeting of the *Alaska Library Association*, and intensive seminars and workshops are conducted during the year, often utilizing teleconferencing with instructors and special speakers from other locations around Alaska, the lower 48, or abroad.

In 1974-75 the *Alaska State Library* sponsored the Tri-dimensional Training Program utilizing the ATS-6 satellite (Lesh and West, 1985, p. 114). The three components involved a satellite link (two-way audio and one-way color video), a face-to-face workshop, and an extension course offered by Loyolla University in Chicago. It was one of the first workshops utilizing mixed modes of instruction and interaction (Lesh and West, 1985, p. 114).

The audio conferencing capability of the previously mentioned "Learn Alaska" was quickly tapped by the professional librarians and information specialists to conduct meetings and seminars. Audioconferencing allowed the University of Washington Library School to offer a course on critical issues in librarianship to Alaskan librarians in different locations; the course was sponsored by the University of Alaska and funded by the *Alaska State Library*, a further example of close institutional and organizational cooperation (Lesh and West, 1985, p. 115).

INFORMATION ECONOMICS

"The institutionalization of information processes characteristic of contemporary times contrasts with the earlier times when information was transferred orally, outside the formal market arrangements which now generate, store, and transmit information for commercial sale" (Melody, 1986, p. 7).

Information as a Commodity

The current "post-industrial age" named by Daniel Bell is experiencing the shift of economic effort he predicted from predominantly goods production to providing services; and, information is prominent in the services economy. Stories and statistics about the increasingly significant and lucrative role information plays in national and international economies abound in the popular press, particularly in the financial periodicals. Information handling has evolved new technological forms to provide greater storage capacity, better management, and faster access.

...The consequences of the changing importance and growing commercialization of information are extraordinary. Once information is a saleable item, as it now is, the public institutions that customarily have produced, preserved, and disseminated it--universities, libraries, and the government itself--are themselves forced to become privatized or lose their function in the information process. Accordingly, the observable changes affecting public informational and cultural institutions across the country, to a large extent, are attributable to treating information as a commodity...

Schiller, 1986, p. 34

A conceptual shift in the definition of information is occurring at various levels of society. Those involved with technological change are more aware of how the information technologies are quickly evolving, and how society may be affected. Financial institutions and world money markets are a part of that high-tech system of fast and efficient information storage and transfer which translate immediately into financial

gains and losses. More and more groups define information specifically to provide utility. These changing definitions and conceptualizations of information are similar to what Blaise Cronin describes as information "intensification."

The realisation that information is an important personal, organisational and social resource, which can be capitalised, which has a market value and which requires effective management has begun to shift attention from the hardware to the content of information systems and the uses to which information can be put...Information may be intangible, but the market now recognises that information can, in some respects, be treated like any other commodity...an unusual commodity: one which does not deplete on consumption, which can have multiple life cycles, which can be easily replicated or mass produced, which violates some of the basic rules of ownership, which can have positive externalities and which, perhaps most importantly, has the features of a social good. It is this last aspect which necessitates some form of government information policy or legislative framework to ensure that the rights of access of Everyman are protected in a free-market economy.

Cronin, 1986, pp. 126-127

The increasing complexity of information can be bewildering and alienating to those not actively involved with it. The increasing segmentation of information and dynamic growth of the related information handling technologies are exhilarating for those actively involved, but alienating to the passively aware who may partially or even fully recognize the significance and consequences of those changes, but who aren't actively involved.

Regarding postindustrial society, I suggested earlier the following aphorism: "more and more information, less and less meaning"...and [this] should be understood as meaning "less and less absent information." Such, indeed, is the ideal of a society which, as it turns interpersonal relations into commodities and thus paralyzes its members' autonomy...

Dupuy, 1980, p. 16

Information and the Public Good

While librarians, information specialists, and information scientists can technically process information more quickly, in greater quantity, and at decreasing costs, the ultimate decisions must be made about what information is worthy of capturing. Judgements must be made.

Information for the public good may be essential information for the purposes of government and its administration. It may also be essential for education, research, or scholarship. In turn, some of the education, research, and scholarship may be related to producing professional skills which in turn will benefit the economy. Expenditure on information services related to government purposes and professional skills is recognisable as being in the overall national interest... Finally, it must be remembered that information for the public good extends beyond the understandable needs of government and professional education and research. Beyond these there are the activities of information collection, storage, preservation and dissemination, which are part of the activities related to our national culture and heritage or to the education and development of people. Expenditure here is essentially a matter of judgement, but judgement which must be profound because it is on matters which for many people make the other, necessary activities worthwhile...

Clayton, 1986, pp. 73-74

While information may be carefully considered for its ultimate public good, the impact of information on society portends changes in the educational systems and the conceptual shift in the way we perceive information.

...the most significant infrastructure service is an educated population, not only with a distribution of skills that are immediately required, but also with the knowledge and ability to adapt and learn new skills as circumstances change... In the information economy, what is needed is critical awareness, creativity, intellectual flexibility, and adaptability to continuously changing circumstances.

Melody, 1986, pp. 13-14

The Privatization of Public Information

The privatization of public industries and services is occurring more frequently in the US and British national economies. In the United Kingdom, privatization appears to take the form of transforming government owned industries and services into private corporations open to public subscription. Privatization reduces government involvement in those enterprises, and ownership of those companies--formerly by all citizens--is reduced to a smaller number of individuals who purchase shares. A combination of circumstantial and well considered philosophical, political, and economic decisions are assumed to underlie such privatization decisions of former publicly held industries and services. And, ultimately such decisions are subject to change as evidenced by nationalization of private companies.

Privatization occurs somewhat differently in the US. Goods and services for local, state, and federal governments previously provided internally are now increasingly contracted out to private sources. This shift represents an attempt at governmental cost cutting and stimulation of non-governmental enterprise.

Local, state, and national governmental agencies function upon information of various types, mostly that required through legislative, judicial, or executive mandate. Information provision is the purpose of most governmental offices and therefore represents a significant expense. In the efforts of such governmental agencies to cut expenses and improve efficiency, cost-cutting may involve elements of privatization.

To increase efficiency increasing numbers of US federal agencies use computer and telecommunications technologies for data collection, storage, retrieval, and dissemination, then contract with commercial firms for the actual dissemination of the information collected at taxpayer's expense. Public access to such public information is complicated by electronic formats and user charges (American Library Association, 1986, p. 1). The federal Office of Management and Budget's intent to privatize the *National Technical Information Service*, a central source and repository for unclassified scientific and technical reports, has raised strong objections from major library, scientific, and academic organizations which

fear less access (American Library Association Newsletter, 30 January 1987).

There are also examples of privatization by default rather than direct, conscious action. As public funding for libraries and information handling decreases, new arrangements between private and public sectors develop to allow the continuation public services. In some cases the new arrangement may be mutually beneficial and provide better service to the public. In other instances it could erode the public's access to previously available services.

Troubling to some or not, the private appropriation of public property has become the general pattern and it is being applied to the entire information generating sector. It is not only universities and governmental labs that are beginning to be enmeshed in a widening net of commercial enterprise.

Public and university libraries are experiencing similar pressures from the pull and tug of private information suppliers and vendors. Holdings and acquisitions are being put into machine readable formats, while libraries themselves are being obliged to link up their facilities with the data bases offered by commercial vendors--Lockheed, System Development Corporation, Bibliographic Retrieval Service, etc.

Library information capability undeniably is greatly enhanced. Yet this benefit is accompanied by the abandonment of libraries' historical free access policy. User charges are introduced. The public character of the library is weakening as its commercial connection deepens. No less important, the composition and character of its holdings change as the clientele shifts from the general public to the ability-to-pay user.

Schiller, 1986, p. 35

The change from the industrial to the "postindustrial age" has provided benefits and problems. The economic system has shifted and many previous expectations are now unmet just as many unexpected benefits have emerged. But perhaps rather than feeling manipulated and powerless, we should engage in goal-setting, specifying objectives to gain a sense of control. The process of setting goals within a segmented society is not simple; the issues are complex and interrelated as are the processes of consensus development. Optimists might view such an exercise as feasible and imperative with information policy development as the vehicle; cynics

might believe such efforts to be impossible; and, the pragmatists might view information policy development as impossible, but the only positive recourse?

...The privatization of public information in the governmental sector is undertaken with careful semantic protection. "In a relatively short time," a library publication notes, "the phrase 'national information policy' has had its meaning drastically narrowed from designation of the collective needs and rights of all Americans to a kind of code word expressing the concerns of the private sector, and especially its claims to the riches it perceives in the bureaucratic wilderness preserves of government-produced and distributed information.

Schiller, 1986, p. 36

NORTHERN INFORMATION-- INTERVENING FACTORS

Several events and activities may impact arctic northern information. The activities or events listed below may singularly have limited effect; cumulatively however, they could significantly affect northern information provision. In most instances the activities are initiated by non-northern institutions or agencies; increasingly however, the northern institutions and groups are the initiators.

US Arctic Science Policy

"An Act to provide for a comprehensive national policy dealing with national research needs and objectives in the Arctic, for a National Critical Materials Council, for development of a continuing and comprehensive national materials policy, for programs necessary to carry out that policy, including Federal Programs of advanced materials research and technology, and for innovation in basic materials industries and for other purposes," are the reasons the US Congress and the President created the *Arctic Research and Policy Act of 1984* as Public Law 98-373.

Geza Thuronyi of the Library of Congress and Jerry Brown of the Polar Program Division of the National Science Foundation provided an overview of this Act and its implications for librarians and information handlers. They cite the Act as a derivative of the U.S. arctic policy (§102), and the April 14, 1983, National Security Decision Directive 90 which

- ...identifies four major elements: protecting essential security interests in the arctic region, including preserving the principle of freedom of the seas and
- superjacent airspace; supporting sound and rational development in the arctic region, while minimizing adverse effects on the environment; promoting scientific research in fields contributing to knowledge.

Thuronyi and Brown, In:
Hoiseth and Haupt, 1986, p. 1871

Cited in the Act is: "Improved logistical coordination and support for Arctic research and better dissemination of research data and information is necessary to increase the efficiency and utility of national Arctic research effort."

The Act established: a 5-member *Arctic Research Commission*, appointed in March, 1985, to promote arctic research and recommend policy; and, an 11-member federal *Interagency Committee* which, with the *National Science Foundation* designated lead agency, developed and in July, 1985, announced a national arctic research policy including a five-year plan to implement it.

A series of public hearings was conducted by the *Commission* and concerns about information provision were cited in Alaska:

A pervasive research concern is the management of data and information resulting from Arctic research. Many persons have urged that the highest priority should be placed on improving access to Arctic research data and findings. The Arctic Research and Policy Act directs the Commission to consider this matter and propose improvements.

Repeatedly, participants in the Alaska public meetings that the Commission held in June 1985 commented on the amount of research information that goes no further than Federal agency or industrial technical reports (the so-called gray literature). Similarly, industry has conducted extensive research in the Arctic leading to reports that no longer have proprietary restrictions, but it is unclear to what extent these reports are generally accessible.

U.S. Arctic Research Commission,
1986, p. 23

Appearing in the report The United States: An Arctic Nation of the US *Arctic Research Commission* was a section entitled "Information Handling" from which the following is extracted:

The act directs the Commission to recommend ways to improve the management of arctic research information and data. As mentioned in the section on "Federal/State Cooperation," both the Commission and the governor of Alaska identified data handling and information systems as one of the top priorities for federal/state cooperation. As a federal/state group had already been created to develop a more efficient information handling network and to define agency responsibilities in this system, both the Commission and the State of Alaska have encouraged the Committee

on Natural Resource Information Management (CONRIM) in its work.

By locating its Alaska office at the Arctic Environmental Information and Data Center (AEIDC), the Commission hopes to maintain awareness of new initiatives and of problems related to information handling.

Early in FY 1986, some Commission members met with the president of the Arctic Oil and Gas Association (AOGA) to discuss ways to expedite public awareness of and access to nonproprietary reports and data. The association has now made arrangements with AEIDC to transfer some specific reports and some data to the public domain.

In reviewing the research programs included in the Inter-agency Committee's preliminary draft of the five-year arctic research plan, the Commission noted a general concern about the management of data and information. It suggested that there be some effort to include programs of arctic research, and later budget requests associated with them adequate provision for making the research findings easily accessible and fostering their use.

Currently, the University of Alaska's *Alaska Environmental Information and Data Center (AEIDC)* is investigating the development of a U.S. Arctic Information Network to "make it possible for a user (researcher, developer, or decision maker) anywhere in the US to easily ascertain if information on a particular aspect of the arctic exists; and if so, how and where to obtain it." The proposed plan for the network is to be submitted to Congress in June, 1987, and its preliminary form was 1) the linking and strengthening of existing information sources, and 2) identifying the remaining needs within six categories of information resources: 1) Experts (individuals), 2. Digital data bases, 3. Proprietary data bases, 4. Gray literature, 5. Bibliographic data bases, and 6. Libraries.

AEIDC is currently evaluating methods of identifying and capturing the "gray" or "fugitive" arctic literature. This category of information, usually the intermediate step between raw data and a more easily available published final document is significant because large quantities of such information never gets published (Sokolov and Dursi, 1986, p. 1). The proliferation and elusiveness of Alaska archeological information exemplifies this "gray" literature problem (E. West, 1985).

Alaska State Research Policy

In 1986 the Alaska State legislature enacted and the Governor established an Alaska research policy. Its purposes are: "to establish state research policy, priorities, and goals, and to provide a plan for basic and applied scientific research for the state, including natural resources and materials, physical, biological, and health sciences, and social and behavioral sciences" (Chapter 32, Laws of Alaska provided as Appendix 2).

Chaired by the Senior Science officer of the Governor's Office who also serves as its director, the 5-member *Science and Engineering Commission* appointed by the Governor has the following tasks:

- 1) with the senior science advisor, develop and recommend an integrated state research policy;
- 2) provide policy information to the Governor and the Legislature on matters that have scientific and engineering significance;
- 3) receive scientific and engineering information from the academic and industrial communities;
- 4) act in an advocacy role for scientific and engineering issues and science education important to the state that might otherwise be overlooked;
- 5) assist state agencies in assessing research needs and establishing priorities among them;
- 6) facilitate cooperation between state agencies and the University of Alaska and other academic institutions and industry;
- 7) recommend methods to improve logistical planning and support for needed state research;
- 8) suggest methods for improving efficient sharing and dissemination of data and information in the state among interested public and private institutions;
- 9) promote science education and training for young scientists and engineers to pursue careers in the state and the Arctic;
- 10) cooperate with the Federal Arctic Research Commission in the formulation of the Arctic research policy;
- 11) not later than September 30 of each year, present to the governor the commission's recommended research priorities of the state for the next fiscal year.

The *Alaska State Research Policy Act* closely parallels that of the federal *Arctic Research Act and Policy Act of 1984* and is largely an

extension of that Act. Duty #8 of the State Act reinforces the need for the sharing and dissemination of research data and information.

Alaska State Legislature

A State legislative bill to improve accessibility to oil well information and production data was recently introduced. According to the report of the *Alaska State Legislature, Senate Special Committee on Oil and Gas*, February, 1987, House Bill 41 limits to two years the length of time such information provided to the state can be kept confidential, allowing potential bidders to "more accurately assess the value of state leases."

This action reveals some legislative action to improve access to information previously inaccessible. In spirit it reinforces the recommendations of the *Arctic Research Policy Act, Interagency Committee and Commission* and meets federal and state concerns about increasing access to arctic information.

Regional Native Information Concerns

In the category of arctic human research, one of four major categories of the current US Arctic Research Plan, the *Arctic Research Commission* designated highest priority to: "research to identify and resolve the major health, behavioral, and cultural problems that derive from the distinctive character of the arctic environment and from increasing resource development, industrialization, and urbanization" (The United States: An Arctic Nation, 1987, p. 18). This recommendation, the only category dealing directly with humans, provides recognition of Alaska Natives and others living in the arctic.

Within Alaska, the *Alaska Federation of Natives (AFN)* representing most Alaska Natives, has had "numerous calls for increased information to Alaska Natives in fields of education, environment and health. Many calls related to a community's right to know about hazardous waste disposal in local areas, arctic haze, and information on the maintenance of healthy wildlife populations" during the past 3 AFN conferences. In 1984,

resolution 84-27, passed the annual convention urging increased funding for state and federal demographic and vital statistics data collection programs (Personal correspondence from Jim Benedetto, 4 May 1987).

During the last international meeting of the *Inuit Circumpolar Conference (ICC)* in Kotzebue, 1986, draft resolutions discussed pan-arctic Indigenous concerns. Although the final status of the draft resolutions have not been clarified (Correspondence requesting clarification from Mary Simon, president of the ICC, has not been received), the following ICC drafts are representative:

Regarding the feasibility of creating an Arctic Environmental Bill of Rights:

...19e) rights of access to information on a timely basis (p. 25);

...24. It is vital to establish and maintain, in each Nation-State within the Inuit homeland, systems for collecting and analysing health and social data pertaining to the North. Ready access to this data should be provided to Inuit and other northerners and scientific and government bodies (p. 31);

Regarding cultural issues:

...1. Eliminating political and regulatory barriers to the free flow of information throughout the circumpolar region is fundamental to the survival and development of Inuit culture (p. 39);

...8. Inuit must have free access to the results of Arctic research including data generated by high-altitude and satellite-based, remote-sensing systems (p. 40);

Principles of Northern Scientific Research:

...1. It is recognized that northern scientific research can potentially provide vital information pertaining to a rapidly growing number of activities and subject matters of interest and concern in Inuit circumpolar regions;

...2. If appropriately determined and made available in timely fashion, information derived from scientific research can serve as a powerful tool in planning and decision-making. For example, it can help Nation-State governments, Inuit and other persons make informed decisions in regard to new technologies, development projects and other activities proposed for the North. By assessing proper information, environmental, social, economic and cultural impacts (both beneficial and adverse) could then be taken into account (p. 57).1

The comprehensiveness and depth of the proposed ICC resolutions reveal the importance and significance placed upon information by this circumpolar body.

Native organizations across the circumpolar north also appear to be taking more initiatives within their national jurisdictions. In Alaska, the *Alaska Federation of Natives* has provided unified leadership for the Aleuts, Eskimos and Indians, and non-Natives have increasingly sought the counsel of AFN on issues. Within Canada Robert Higgins, a researcher of the *Inuit Tapirisat* urged more "cooperative research" in which Inuit and non-Inuit reseachers would go beyond the usual methods of contemporary research and significantly involve Native peoples in the conceptualization and design of research ideas and concepts (Higgins, 1986, p. 37). Twenty Native organizations in the North West Territories have made a similar request (Lange, 1987, p. 1). Such research acknowledges Native concepts which could assist non-Native understanding of research phenomena.

International Cooperation

Cooperation among northern libraries is not a phenomena unique to Alaska. In Scandinavia *NORDINFO* has united Nordic libraries "to coordinate the acquisition of literature...to support various types of union catalogues, to facilitate document delivery, and to promote Nordic interlibrary lending (Munthe, 1985, p. 10). This cooperation has particularly benefited libraries suffering acquisitions budget cuts which in turn decreases the purchase of international research materials. Through *NORDINFO* interlibrary loan, international materials may still be borrowed.

The *Arctic Institute of North America* recently announced a planned joint venture with a number of North American institutes in project "Northern Information Homecoming." A small team of information experts will prepare papers on the status information within particular subject areas, identifying Canadian capabilities within those areas as well as data gaps. These state-of-the-art papers will become the database for decision makers (Robinson, 1987, p 1).

Such cooperative networks for regional polar information are developing as information storage and telecommunications technology capabilities increase and scales of economy become significant. Increasing international contacts and recognition of the similarity of needs have also facilitated closer cooperation among institutions.

The Changing Roles of Librarians and Libraries

The stereotyped image of a bespectacled librarian presiding over a collection of books is rapidly changing. While those traditional book tending skills are still needed, the materials over which the librarians preside and the publics which the librarians serve have dramatically changed! The increase in information, the significant philosophical changes in information management, and the technological skills necessary to access materials for users all require enhanced skills. Cited earlier, Cronin discussed the information user as one who required differing levels of assistance, dependent upon two skills--subject knowledge and information access knowledge. Increasingly in addition to the more traditional "librarian" role, the librarian serves as an "information specialist" to tap the information sources not a part of the earlier training. As Judith A. Carrie of the University of Calgary Research Services and Technology Transfer program states "...Technology has advanced to the point where the librarian is becoming a consultant. Many researchers prefer to do their own searching of oft-used databases. But some librarians still feel that end-user searching is a threat to their existence (Carrie, 1986, p. 153).

Although librarians have always been involved with vendors who offer goods and services for sale, the information libraries have are becoming the object of interest by those same vendors who seek to distribute and sell that information. The librarians and information specialists' roles are changing, and with it must change the conception of the value of collections. Many libraries are an economic resource which private vendors are eager to exploit; if librarians are not aware of the inherent value of their collections, they may well become the information source from which private vendors provide saleable services in order to gain access to the vendor's larger databases.

This increasing information commercialization and packaging and the impact of marketing terminology changing "users" into "clients" is inherent when funding for public-supported information decreases and "for purchase" information becomes increasingly common. Within this environment, Carrie provides an interesting set of recommendations for members of the *Northern Libraries Colloquy* who deal with northern information:

- Study collection development policies of northern library collections and investigate possibilities of universal access to location codes;
- study possibility of northern related databases becoming available through one, internationally accessible vendor;
- promote all northern information in a coordinated way through workshops, conference displays, journal articles, etc. aimed at end users;
- investigate the possibility of producing bundled products of multiple source information for end-user markets; and,
- produce a guide to reference sources in two formats; one aimed at the information specialist, one for the broader, end-user markets (Carrie, 1986, p. 156).

Alaska Library Association Committee on Information Networks

During the last session of the Alaska State Legislature, a study entitled "Managing Alaska's Information Resources, a Proposed Statewide Policy" was produced by the Interim Joint Committee on Telecommunications and the House Special Committee on Telecommunications. It identified 3 current information delivery systems for the management and delivery of state information--television, computers, and audio-conferencing--and proposed a policy to manage them.

The exclusion of libraries was immediately identified by the *Alaska Library Association* and resulted in their subsequent statement entitled "Alaska's Libraries: Links in a Statewide Information Strategy." This document presents a brief history of Alaskan libraries and recommends 9 steps toward what it calls a "state information strategy." The nine steps are as follows:

1. Determine the information needs of both the citizens and government agencies of the state.
2. Provide access to available information networks on an equal basis to all Alaskans.
3. Expand the accessibility of existing information resources.
4. Expand the use of government databases available for direct information access.
5. Maximize the availability and use of the Alaska Library Network.
6. Inventory all systems of technology now in place with implications for information use. Monitor emerging technologies for information applications.
7. Designate and enhance the library or similar facility as the principal source for community information services in order to minimize expenses and maximize access.
8. Develop training programs throughout the state to facilitate use of the information networks in all locations.
9. Establish a committee to advise the Governor on the development and management of Alaska's information resources.²

The development of these two papers is indicative of the relationship which State agencies and professional organizations with information responsibilities face, particularly as financial budgets decrease and more direct financial and jurisdictional competition occurs for resources to coordinate information.

External and internally mandated measures of accountability will not likely cease during periods of economizing, and information needs will likely increase rather than decrease. Cooperative efforts characteristic of the Alaska Library community may now extend to include the technological information sector.

DISCUSSION AND RECOMMENDATIONS

Alaska's Recent Economic Boom

Historically Alaska has had little access to or control of its information. Alaska's sparse population and physical separation from the decision centers of financiers and users of northern information resulted in a long tradition of what McCarthy (previous page 11) termed "information colonialism." However, since Statehood, Alaskan information has increasingly been accessible within the state as the demand increased, professional information services could be provided, and financing could be sustained. Current northern information provision is characterized by a high degree of professional and institutional cooperation.

The recent world-wide increase in information has nicely coincided with a boom of the state's economy resulting from the 1971 *Alaska Native Claims Settlement Act (ANCSA)* and the 1977 Trans-Alaska Oil Pipeline transport of Prudhoe Bay oil. These revenues have been largely used to upgrade the state's information infrastructure ranging from the construction of new libraries, to the purchase of new computer systems for information retrieval and storage, to grants for local library development and personnel training.

Today, the major cash infusions into Alaska from *ANCSA* are substantially completed. As the world petroleum demand declines and stabilizes, the Alaska State economy is experiencing a revenue decline. A forced levelling and diminution of State expenditures is resulting as 84% of the Alaska State revenues are petroleum generated (Fried, 1986, p. 4). In 1987 the prospects for stable state income are highly dependent upon international oil politics, and the once again the role cast by the federal government for Alaska.

Ironically, the boom years of *ANCSA* and oil development increased Alaskans' sophistication in the matters of governance, finance, etc. Acquired particularly in rural areas by rural Alaskans, these leadership skills and political sophistication could continue to improve the quality of rural Alaskan life. This empowerment process may also be politically detrimental under conditions of diminishing financial resources.

Democratic decision-making has raised individual and groups' expectations and may result in more competition for existing funds. However, the greater number of Alaskans active in decision-making should qualitatively improve the State's decision-making.

Alaska's Libraries

Close interlibrary cooperation has characterized the personal and institutional relationships among Alaskan libraries and librarians. The relatively recent development of Alaskan libraries and recognition of the sparse population and high costs of doing business have reinforced the idea of resource sharing.

Leadership among libraries has been provided largely by the *Alaska State Library*. It has actively and successfully promoted interlibrary cooperation, and obtained access to the major collections, academic and municipal, for statewide users through interlibrary loan agreements. The *Alaska Library Association (AkLA)* has similarly emphasized resource and expertise sharing. Because of the state's small population, the staff members of the major libraries overlap with the membership of the *AkLA*, thus amplifying the basic message.

Alaska's small population, physical isolation, and lack of resources have made regional library utilities like the *Washington Library Network (WLN)* very attractive. Library technology economies of scale in the unpopulated Pacific Northwest could be enjoyed only by aggregating users across political jurisdictions; in Alaska's case, (*WLN*) not only provided access to collections it could never hope to otherwise tap, it also provided access to the rural parts of Alaska. Utilizing such a Pacific North West regional service has been significantly more beneficial than opting for a less comprehensive, localized network.

A possible problem for Alaskan libraries in *WLN* is the potential drain upon the already sparse local collections when those are made available to the regional users. Will demand for scarce Alaskan materials increase and result in declining provision of local materials for local users? Such peculiarities must continuously be evaluated against the benefits; however,

once small libraries like those in Alaska commit to such large utility systems, it becomes increasingly difficult to sever the relationship.

Maturing Identities

Information has been an important factor in promoting the individual and collective identities of Alaskans. Through Alaska's historic times, information and the control of that information has defined how Alaskans see themselves. The common experience and history of the *Alaska Native Claims Settlement Act* and the effects of petroleum development have reinforced the collective identities of Alaskans--Native and non-Native alike.

Alaska Natives have increased continuing contact with other Native peoples of the circumpolar north. From the *Inuit Circumpolar Conference* is platform are voiced mutual Native concerns transcending national boundaries. As circumpolar Native peoples establish collective cultural and political identities, their informational needs will become increasingly evident as will non-Native interest in them.

As Alaska and the Pacific Northwest currently develop a regional identity, they now acknowledge that the geography and politics which caused them to unite may take them into the future. It is significant that the *WLN* system hardware has been purchased by libraries in Australia, New Zealand, and China. The Pacific basin is the next geographical region which may unite currently disparate groups into a regional political unit. With significant economic activity in the Pacific basin, there is increasing interest not only in the cultural and historical information of the region but also that of resources and commerce.

Maturity may bring with it an increased awareness not only of the localized needs for information, but also the obligation and responsibility to provide for others' needs. Increased awareness and curiosity of the north is not exclusively a northern phenomenon.

Changing Information Definitions

The changing definition of "information" and the increasing dependency upon it has increased the types and numbers of those involved with "information". Whereas libraries were initially the only information arenas, the high-technology and commercialization of information have attracted new players. "Information" now is an undefineable conglomeration of highly specialized, technically inclined, knowledge related activities--each with advocates and enthusiasts and a resulting plethora of organizations, conferences, publications where previously the lonely librarians presided. Such activity may be healthy and stimulating to the initiated, but perhaps also overwhelming and intimidating to the uninitiated.

Alaska is experiencing the information boom. Having completed a dynamic period of economic growth fueling an influx of population and public sector spending, information use and growth has been significant. The international interest in Alaskan information for commercial, strategic, cultural, environmental, and recreational purposes indicates continuation of the historic curiosity about the north. Fortunately, now Alaska as a state has information of its own, and control over it. That control must be used to the state's advantage, particularly in negotiations with other entities desiring information. The inevitable development of a national arctic information policy and potentially a national information policy perhaps impinging upon the state should hasten the state's efforts to establish its own information needs and priorities.

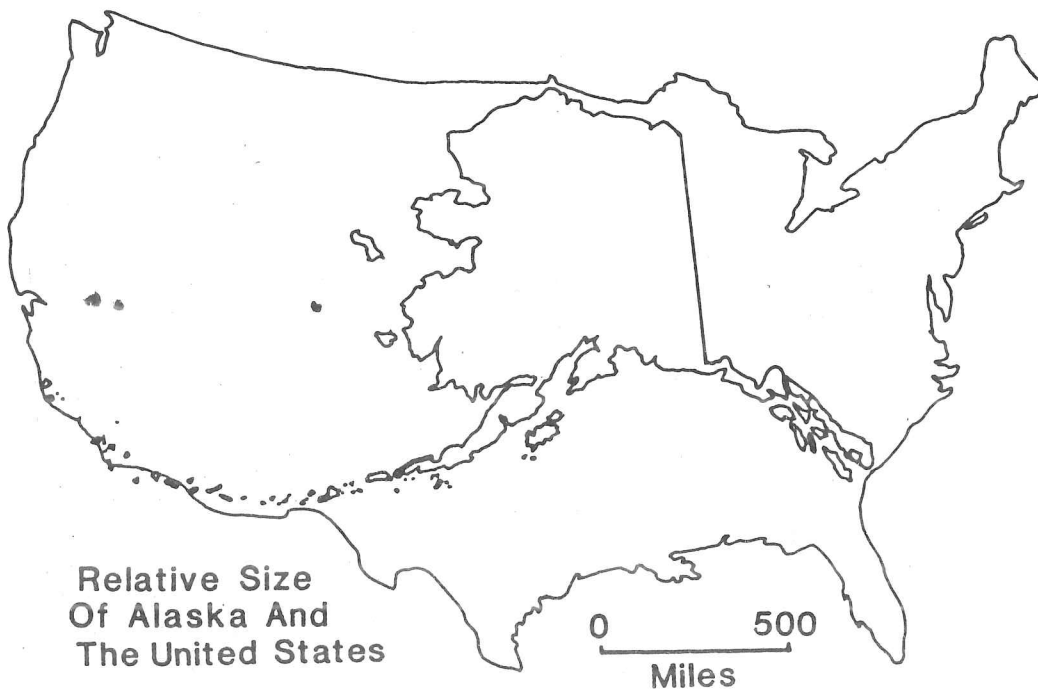
Northern political control between Alaskans and the federal government is illustrated in the following two maps. In the first map, Alaska is presented as the US gateway to the militarily strategic Arctic. In the second map, Alaska overlies the US. Although the maps were created for different purposes, they illustrate how Alaskans view their state and how they believe the federal government uses them.

Alaska and Arctic Boundary
Defined by the Arctic Research and Policy Act of 1984



Source: Adapted from National Issues and Research Priorities in the Arctic
Polar Research Board, National Research Council, Washington, D.C., 1985

Alaska as Perceived by Alaskans



Recommendations

The greatest dilemma facing those dealing with Alaskan information is how to accommodate the diverse interests with decreasing state revenues and increased constituencies. Alaskan information will feel the effects of science and research policy established by agencies other than its own. The impact of the national *Arctic Research and Policy Act* and its own *Alaska Research Policy* will affect information gathering, storage, and dissemination.

The time may yet be premature for the actual development of a state information policy; however preliminary preparation may prove useful. Particular preliminary steps might include:

a) an initial meeting of those who may be affected by such a policy to discuss mutual concerns, particularly identifying needs and goals. Harry East's characterization of database producers should be kept well in mind: "for duties," "for profits," and "for funs." And among information users, the "citizen" or general user must be represented.

b) presentations to specific individuals and groups such as the *Alaska Library Association*, the *Alaska Native Foundation*, the *State Librarian*, the legislative *Committee on Telecommunications*, the numerous private information services, etc. all which may have interests or be affected by policy development to stimulate discussion;

c) review the form and content of existing information policies of other bodies for effectiveness and applicability to Alaska;

d) have potential policies reviewed for commercial and ethical implications beyond Alaska, particularly as part of regional economic development efforts, transnational cultural archives, etc.; and,

e) consideration of the creation of a viable commercial Alaskan database capable of generating revenues to benefit other informational efforts.

The knowledge of circumpolar peoples, the resources of the northern polar regions, monitoring human activity below, on, and above the sea ice and vast landscape--all these kinds of northern information are important. That northern information is important not only to adventurers and scientists, but also to homesteaders seeking a future and Native peoples

examining their cultural pasts, and to policy makers. Ultimately, information may be one of the most significant resources of the north--yielding more of ultimate value than all the furs of Russian-America, the gold of many stampedes, and perhaps even the oil of Prudhoe Bay.

AFTERWORD

The desire for a literate Alaska well provisioned with information of its own is part of a continuing dream. In the introduction to his 1927 Alaska Bibliography, Judge James Wickersham wrote:

An orderly government under the Constitution of the United States has now been organized by the people in the Territory of Alaska, and just laws, enacted by our own elected representatives, are enforced equally upon all our citizens. Settlements are being extended to all parts of the Territory, and its great natural resources developed by our educated type of mankind. The printing press is found at work in every town; libraries are supported by law, and common schools in every settlement. A system of public high schools, and the Alaska Agricultural College and School of Mines, at Fairbanks, invite our children to higher educational advantages within the Territory...

Fishing, mining and agriculture are flourishing. Our population is increasing. Our homes are made happier by a constant supply of good books. Some of these are now being printed on Alaskan presses, while the public mails bring the latest editions of the best literary, religious and scientific works, and general periodicals, the next week after they are turned off the eastern presses.

This compilation [bibliography] was prepared for the purpose of bringing together, under one systematic arrangement, and thereby preserving the printed record of the labors of all those who have heretofore engaged in discovering and developing the lands and resources of Alaska, and establishing here that civilization of which we are so proud to be a part. We hope its governmental, educational and material growth will continue in freedom until Alaska shall become one of the sovereign States in the American Union, and thenceforth forever.

Juneau, August 24, 1927

In: Wickersham, 1937, pp. 36-37

If we could bring the old Judge together with Ticasuk, what interesting conversations there may have been. Judge Wickersham, devoted to Alaska, conducted court all over the Territory during a long career as a federal judge. Continuing devotion to the Territory resulted in his compilation of the extensive Alaskan bibliography still consulted by researchers.

Ticasuk, devoted mother, nurse, teacher, writer, respected Inuit elder, was a life-long learner as symbolized by her retirement years at the University of Alaska, Fairbanks. Ticasuk was also the consummate teacher, sharing her knowledge about Inuit ways with her professors as she learned from them. She lived her name "Ticasuk"--a respository and teacher of Inuit knowledge.

Ticasuk and Wickersham symbolize the spirit of Alaskan information and knowledge.

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APPENDIX I

Excerpted from George Rogers'
"Alaska: the Evolution of a Northern Polity"
In: Armstrong, et al, The Circumpolar North.
London, Methuen & Co, Ltd. 1978.

Introduction

The European discovery of Alaska was made in 1732 by the Russians M. S. Gvozdev and I. Fedorov when they sailed across Bering Strait. (Here we leave aside the possibility, which is quite likely but unproven, that earlier Russian seafarers may have seen it about the middle of the seventeenth century.) Their achievement was long unknown, and hence the generally accredited discovery was that made in 1741 by Vitus Bering and the members of the second expedition sent from Russia to discover where Asia ended and America began, or if they were joined. It was of greater contemporary importance, however, that the survivors of Bering's expedition returned with some sea otter skins and information on the animal life of the newly discovered mainland, islands, and offshore waters. The eastward course of Russia's empire and the fur trade converted the passage from Kamchatka to Alaska into a busy sea lane, and in 1799 the Russian-America Company was granted a monopoly over all commercial enterprise and the governing of Russian America. Commercial penetration was preferred to a direct claim of sovereignty, partly because Britain was seen to have succeeded so well with the East India Company and the Hudson's Bay Company. The Company's peak activities extended as far south as Fort Ross in California, but by the mid-nineteenth century it was of little economic value to the motherland or its shareholders. The primary fur resources were severely depleted, sovereignty and monopoly claims were ignored by aggressive traders and whalers from New England, and the invasion of Russian America by the Hudson's Bay Company had been formalized by a face-saving lease over southeast Alaska. The Colonial experiment had proved a failure, for at no time did Russian settlers reach 1,000, and there were no peasants to provide a local food base.

On 18 October 1867 Alaska was officially transferred from Russia to the United States, although it was not until the summer of 1868 that the US Congress could be persuaded to appropriate the \$7.2 million purchase price. The acquisition was not a popular one, even supporters of the expenditure being convinced that the transaction had no commercial value but was justified either as a future strategic asset or a present act of friendship to Russia. The territory did prove to have commercial value, dramatically highlighted by the gold stampedes of the 1880s and turn of the century, and the current oil boom; and the advent of the air age and the Second World War underlined its strategic value.

The acquisition of Alaska also set in motion another process which has been an American tradition since the first expansions from the eastern seaboard and a dominant theme in Alaska's history after 1867, that of settlement and political development of new territories. Speaking on behalf of Alaska's development as late as 1915 a US Congressman from Minnesota gave this a classic statement:

When the United States acquires domain over extensive tracts of territory, the duty devolves upon it not so much to exploit the natural resources for the benefit of the people of the States as to build there a civilization, to induce immigration and settlement ...that homes may spring up and that that territory may contribute to the general strength and happiness of the whole Union.

Generous use of this type of political rhetoric succeeded in changing Alaska from 'Seward's Folly' in popular sloganmongering to the 'the Last Frontier', and an effort was launched to replay the nineteenth-century 'Winning of the West' in a new geographical setting. In spite of application of homesteading and land programs, agricultural and settlement subsidies (culminating in the 1935 Matanuska Valley agricultural resettlement project), and the building of a railroad (1923) to 'open the land', the results were disappointing. Alaska lost population between the 1900 and 1920 census, and remained stagnant until 1940. Although population expanded dramatically and continuously after 1940, the number of farms fell from 623 in 1939 to 310 in 1968. In a 1937 report on the value of Alaska to the nation, the National Resources Committee concluded that the expected functioning of this process not only was unrealistic in this northern environment, but was a hopeless anachronism in an age of increasing urbanization and specialization.

Since the mid-twentieth century mark, however, Alaska has expanded rapidly in population, and in economic and political development. A contemporary American society and polity appears to be emerging in Alaska, as hoped for by the romantics and visionaries of the last century, but its character and the path of its evolution contradicts the blueprints of public policy and private dreams. For reasons of physical geography and market remoteness, Alaska could not follow the evolution of an agricultural-based society, but it has found a path leading directly towards development of a twentieth-century urban society. The current popular belief that the future rather than the past will set the Alaskan patterns of development is implied in the latest Alaskan slogan, 'North to the Future'...

Political Development

...From 1867 to 1884 there was no civil government in Alaska beyond its creation as a United States Customs District under the jurisdiction of district courts in Oregon or California. The gold stampedes brought popular demands for elaboration of government and administration. Under the first Alaska Organic Act (17 May 1884) Alaska became a civil district, a judicial district, and a land district. A governor was appointed by the President of the United States to administer the provisions of the Act. Homestead laws were extended to Alaska in 1898. The Civil Code of 1900 granted Alaskans the authority to establish local municipalities, and in 1906 the right to elect a voteless delegate to Congress. The second Organic Act (24 August 1912) completed the creation of Alaska as a territory of the United States with its own popularly elected Legislature. But the Governor was still a Presidential appointee, the actions of the legislature were subject to veto by the US Congress and the courts, and

most basic governmental functions remained beyond local control or influence...

In 1958, the last year of Alaska's territorial status, 99.6 per cent of the land area and its resources were in federal ownership and control, and fisheries resources were still under federal management.

This combination of private and public absentee control thwarted resident aspirations and created popular demand for greater self-determination. The conflict between resident and non-resident interests was transformed into an effective grass-roots political movement by the catalyst of population growth associated with defence development, and Alaska became a State in 1959. This shifted the balance of ownership or control of land and resources, and by decentralizing political power included resident as well as non-resident interests in shaping the objectives of economic development.

The creation of the State of Alaska on 3 January 1959 was a ceremonial event of the highest political order. In effect, the people of the United States acting through their duly elected representatives, the members of the Congress and the President of the United States, entered into a compact (so described in the Act) with the people of Alaska acting through a popular referendum, by which sovereign power and responsibilities were shared and certain institutional rearrangements and conditions agreed upon... The Act also offered the new State the right to select 103.33 million acres (410,000 sq km) from the public domain (27 per cent of the total land area of the State), and, immediately following statehood, the Secretary of the Interior transferred all responsibility for the management of commercial fisheries resources to the new State.

Natives had a low level of participation in development and its economic and social benefits, and suffered loss of lands and resources essential to maintaining their traditional ways of life. Organized protest was weak, sporadic, and ethnically and geographically divided. This changed in the mid-1960s when concern arising from a combination of major economic and public works proposals brought into being regional protective associations which then united under the Alaska Federation of Natives, the first effective statewide Eskimo, Aleut, and Indian political movement. Formal claims were made to the title to all the lands of Alaska on the basis of aboriginal use and occupancy, and with the support of the petroleum industry and government of the State of Alaska, the Federation secured passage by the US Congress in December 1971 of the Alaska Native Claims Settlement Act (Public Law 92-203, 92nd Congress). In return for extinguishing aboriginal claims, the Native people will receive title to 44 million acres (176,000 sq km) of land and the mineral estate, grants totalling \$462.5 million from the Federal Treasury payable over eleven years, and \$500 million from 2 per cent of the annual revenues from mineral leasing activity on state and federal lands.

The Act also organizes the native people into a system of interlocking regional and village corporations for the purpose of promoting their fullest economic and social development. The geographical boundaries of the twelve regional corporations approximate to the 'territories' of the twelve defined major ethnic groups of Alaska's aboriginal population. Taken as a whole, the Act is as much a development as a settlement Act. In a departure from the traditional approach to dealing with minority peoples, native Alaskans have the opportunity of working out their own destinies with a generous endowment of land, money, and organization...